

VOLTAGE CONDITIONER WITH EMBEDDED BATTERY BACKUP

ABSTRACT

A power module for a CNI avionics system includes a rechargeable back-up battery (17) and a battery charger (9) in a back-up battery channel, a power conversion unit (11, 25, 27 and 29) in a power conditioning channel, and a semiconductor switch (23) for selectively coupling either the output of the power conditioning channel unit or the back-up battery channel through to the module output (24) and the electronics of external LRM's of the cryptographic section of the CNI avionics system, and a microcontroller (14) for controlling voltages and spurious signal emanations. Sensors (51, 52, 54 & 55) provide information to the microcontroller. The microcontroller senses the state of prime power, current draw on the cryptographic devices and adjusts power output between the battery and power supply in real time.